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Karen Jennings, Councilwoman  
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Fred Townsend, III, Town Attorney  
Thomas Wilkes, Town Engineer  
Dawson Green, Town Manager  
Azure DeShields, Finance Officer  
Cathy Beaver, Executive Secretary

Introduced by: Councilwoman Karen Jennings  
Introduced on: April 6, 2011

**ORDINANCE NO. 11-03**  
**Town of Townsend**  
**LIGHT POLLUTION ORDINANCE**

**AN ORDINANCE TO PROVIDE FOR THE QUALITY OF OUTDOOR NIGHT LIGHTING TO CONSERVE ENERGY, REDUCE LIGHT POLLUTION, AND IMPROVE SAFETY BY LIGHT DIRECTION.**

**Section 1.** Amend Chapter 66 of the town of Townsend Code of Ordinances by adding thereto a new section to read as follows:

**Section 66 – 835. Light Pollution**

**(a) Purpose.**

The purpose of this Act is to regulate outdoor lighting so as to:

- 1) Permit reasonable uses of outdoor lighting for night-time safety, utility, security, productivity, enjoyment and commerce.
- 2) Minimize adverse offsite impacts including light trespass, and obtrusive light.
- 3) Help protect the natural environment from the adverse effects of night lighting which threatens wildlife by disrupting biological rhythms and otherwise interfering with behaviors of nocturnal animals
- 4) Conserve energy and resources to the greatest extent possible
- 5) To decrease the expense of lighting.
- 6) Curtail light pollution and improve the nighttime environment for astronomy.
- 7) Improve the travel conditions for persons and vehicles on public ways by reducing glare.
- 8) To improve the aesthetics of the Town of Townsend in general while providing adequate night-time safety, utility, and security

**(b) Definitions.** The following words, terms and phrases, when used in this section shall have the meaning ascribed to them except where the context clearly indicates a different meaning:

- 1) ***Canopy structure:*** Any overhead protective structure which is constructed in such a manner as to allow pedestrians/vehicles to pass under.

- 2) **Fixture:** The assembly that holds a lamp and may include an assembly housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and a refractor or lens
- 3) **Foot-candle:** A unit of illumination produced on a surface, all points of which are one foot from a uniform point source of one candle.
- 4) **Glare:** Direct light emitted by a luminaries that causes reduced vision or momentary blindness.
- 5) **Luminance:** The level of light measured at a surface.
- 6) **Lamp:** The component of a luminary that produces the light.
- 7) **Light direct:** Light emitted directly by a lamp, off a reflector, or through a refractor of a luminaries
- 8) **Light emitting surface:** Any part of a fixture (lamp, diffusers) which emits light rays.
- 9) **Light pollution:** General sky glow caused by the scattering of artificial light in the atmosphere, much of which is caused by poorly-designed luminaries.
- 10) **Light shield:** Any attachment which interrupts and blocks the path of light emitted from a luminaries or fixture.
- 11) **Light trespass:** Light emitted by luminaries that shines beyond the boundaries of the property on which the luminaries are located.
- 12) **Lumen:** A unit of measurement of luminous flux.
- 13) **Luminaries:** The complete lighting system, including the lamp and the fixture.
- 14) **Luminaries full cutoff:** A luminaries that allows no direct light emissions above a horizontal plane through the luminaries' lowest light-emitting part.
- 15) **Luminary's permanent outdoor:** Any fixed luminaries or system of luminaries that is outdoors and this is intended to be used for seven (7) days or longer.
- 16) **Outdoor light fixtures:** Outdoor artificial illuminating devices, installed or portable, used for floodlighting, general illumination, or advertisement.
- 17) **Roadway lighting:** Permanent outdoor luminaries that are specifically intended to illuminate roadways for automotive vehicles.

Unwanted light in public places

The intrusion of unwanted light onto private property

18) **Efficacy - A measure of how much light a light source produces for the energy put into it.**

**(c) General Requirements.**

- 1) **Conformance with all applicable codes:** All outdoor lighting shall be installed in conformance with the provisions of this Ordinance, applicable Electrical and Energy Codes, and applicable sections of the Building Code.
- 2) **Applicability:** Except as described below as exemptions, all outdoor lighting installed after the date of effect of this Ordinance shall comply with these requirements. This includes, but is not limited to, new lighting, replacement lighting, or any other lighting whether attached to structures, poles, the earth, or any other location, including lighting installed by any third party.
- 3) **Exemptions:** The following is not regulated by this Ordinance:
  - A. Lighting within public right-of-way or easement for the principle purpose of illuminating streets or roads. No exemption shall apply to any lighting

19) **CCT - Correlated Color Temperature; color temperature defines the color appearance of a white LED. CCT is defined in degrees Kelvin;**

- A warm light is approximately 2,700 K
- Moving to neutral white at approximately 4,000 K
- Cool white at 5,000 K or more

within the public right of way or easement when the purpose of the lighting is to illuminate areas outside the public right-of-way or easement.

- B. Lighting for public monuments and statuary
- C. Lighting solely for signs, temporary lighting for theatrical, television, performance areas and construction sites.
- D. Underwater lighting in swimming pools and other water features
- E. Temporary lighting and seasonal lighting
- F. Lighting that is only used in emergency conditions
- G. Low voltage landscape controlled by an automatic device that is set to turn the lights off at one hour after the site is closed to the public or at a time established by the authority.
- H. Lighting specified or identified in a specific use permit
- I. Lighting required by federal or state laws or regulations.
- J. If no lighting recommendation or regulation applies, the minimum luminance adequate for the intended purpose is used, giving full consideration to safety, energy conservation, glare, and minimizing light trespass.
- K. For roadway lighting, a determination is made that the purpose of the lighting installation or replacement cannot be achieved by installation of reflectorized roadway markers, lines, warnings or informational signs, or other passive means.
- L. Adequate consideration has been given to conserving energy and minimizing glare, light pollution, and light trespass.

**(d) Standards.**

- 1) All lights shall be shielded in such a way as to direct all light toward the Earth's surface and away from reflective surfaces.
- 2) Light Trespass: Light fixtures or lamps shall be shielded/shaded in such a manner as to direct incident rays away from all adjacent property.
- 3) Lights on poles shall not be taller than the building whose area they illuminate nor taller than fifteen (15) feet whichever is shorter.
- 4) Any facilities which may require floodlighting may not arrange the light in such a way that it will shine towards roadways, towards forests and wildlife habitat preservation areas, onto adjacent residential property or residential use property or into the night sky.
- 5) Any interior lighted signs may not be lit at night when any face of the sign is removed or damaged in such a way that the light may distract drivers or homeowners.
- 6) Except as stated elsewhere in these regulations, light levels will be limited to those published as recommendations by the Illuminating Engineering Society of North America.

7) All street lighting shall have no light emitted above 90 degrees.

**For commercial, business, industrial and natural resource zones and any roadway adjacent to residential zones:**

- A) Any light fixture must be placed in such a manner that no light emitting surface is visible from any residential area or public/private roadway, walkway, trail or other public way when viewed at ground level.
- B) Any Canopy structure used at a business location must have recessed lights with diffusers which do not extend below the surface of the canopy.
- C) Any luminaries on a pole, stand or mounted on a building must have a shield, an adjustable reflector and non-protruding diffusers.
- D) Installation and operation cost: The cost of installing and operating approved roadway lighting on any Town of Townsend public road shall be through a financial method approved by the Town of Townsend Town Council. The costs of all other lighting systems shall be borne by the developer/property owner.

**(e) Penalties.**

Every person in violation of any provision of this Ordinance shall be punished by a fine of not more than **fifty dollars (\$50.00)**. Each act of violation and every day upon which any such violation shall occur shall constitute a separate offense.

Increase dollar amount

**Section 2. Effective Date.**

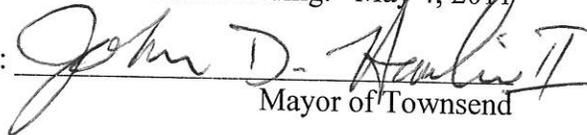
The provisions of this Ordinance are hereby ordered to take effect thirty (30) days following publication in a newspaper of general circulation within the Town of Townsend.

First & Second Reading: April 6, 2011

Public Hearing: April 6, 2011

Third & Final Reading: May 4, 2011

Signed by:

  
Mayor of Townsend